

**REMARKS1**

In the Final Office Action the Examiner made the following rejections:

- 1) Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,272,236 to Pierrat (*Pierrat*) in combination with U.S. Patent No. 5,838,433 to Hagiwara (*Hagiwara*) and U.S. Patent No. 7,133,550 to Hiroi et al. (*Hiroi '550*);
- 2) Claims 2 and 3 under 35 U.S.C. § 103(a) as being unpatentable over *Pierrat* in combination with *Hagiwara* and *Hiroi '550*, and in further view of U.S. Patent No. 6,373,054 to Hiroi et al. (*Hiroi '054*);
- 3) Claims 4, 6, and 7 under 35 U.S.C. § 103(a) as being unpatentable over *Pierrat* in combination with *Hagiwara* and *Hiroi '550*, and in further view of U.S. Patent No. 6,172,365 to Hiroi (*Hiroi '365*);
- 4) Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over *Pierrat* in combination with *Hagiwara* and *Hiroi '550*, and in further view of U.S. Patent No. 7,221,788 to Schulze et al. (*Schulze*);
- 5) Claims 8-11, 13, and 14 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,222,195 to Yamada et al. (*Yamada*) in combination with U.S. Patent No. 6,016,187 to Noguchi et al. (*Noguchi*), and in further view of *Hagiwara*;
- 6) Claim 12 under 35 U.S.C. § 103(a) as being unpatentable over *Yamada* in combination with *Noguchi* and *Hagiwara*, and in further view of *Schulze*;

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<sup>1</sup> As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to certain assertions or requirements applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such in the future.

7) Claims 15-18, and 20 under 35 U.S.C. § 103(a) as being unpatentable over *Hiroi '365* in combination with *Hagiwara*; and

8) Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hiroi '365* in combination with *Hagiwara*, and in further view of *Schulze*.

By this amendment, Applicant amends claims 1, 8, and 15. Claims 1-20 remain pending in this application.

Applicant respectfully traverses the rejection of claims 1-20 under 35 U.S.C. § 103(a). No *prima facie* case of obviousness is established.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. MPEP § 2142, 8th Ed., Rev. 6 (Sept. 2007). “A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention.” MPEP § 2145. Furthermore, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” at the time the invention was made. MPEP § 2143.01(III), internal citation omitted. Moreover, “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” MPEP § 2141.02(I), internal citations omitted (emphasis in original).

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” MPEP § 2141(II). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” MPEP § 2141(III).

In this application, a *prima facie* case of obviousness has not been established because the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Office Action has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art.

1. Claim 1

Claim 1 recites a combination including “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components” (emphasis added). *Pierrat* fails to disclose or suggest at least this feature.

*Pierrat* discloses “[m]ask 161 has a plurality of identical mask patterns 160.1-160.8, wherein mask patterns 160.1-160.8 are formed from the same pattern as represented by pattern database 150.” *Pierrat*, col. 5 ,lines 4-7. However, *Pierrat*, as shown in FIG. 1 for example, discloses illuminating the mask patterns 160.1-160.8 with a single light source 100. Accordingly, even if mask patterns 160.1-160.8 of *Pierrat*

could reasonably be construed as corresponding to Applicants' claimed "inspection patterns," *Pierrat* fails to disclose or suggest a combination including at least "generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components," as recited in claim 1 (emphasis added).

*Hagiwara* fails to cure the deficiencies of *Pierrat*. The Examiner asserts that *Hagiwara* discloses "placing a plurality of imaging components deviating from an optical conjugate plane of a surface of the resist film" (Office Action, page 2), and that this alleged disclosure corresponds to Applicants' claimed "wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components," as recited in claim 1 (Office Action, page 3). The Examiner is incorrect. *Hagiwara* fails to disclose or suggest a combination including "generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components," as recited in claim 1 (emphasis added), as is discussed below.

*Hagiwara* discloses, with respect to FIGS. 31A-31D, a "light source 1 is a light source for emitting laser, and rays emitted from the light source are expanded by a beam expander 202 to become parallel rays expanded" (col. 23, lines 35-37), wherein

“[s]cattered light occurring from each point on the scanning line LCR is condensed by four objective lenses L101, L201, LL1, LL2 to be photoelectrically converted by sixteen photoelectric conversion elements ... light objecting surfaces of which are positioned on pupil-conjugate planes of the objectives ...” (col. 23, lines 44-50). *Hagiwara* further discloses that rays emitted from the single light source 1 are incident on reticle R which may have a pattern formed thereon. However, *Hagiwara* only discloses emitting light from a single light source 1. Beams transmitted through objective lenses L101, L201, LL1, and LL2 are light beams from light source 1 which are either reflected or diffracted by reticle R. See *Hagiwara*, FIG. 31A and col. 23, lines 55-64. Contrary to the Examiner’s assertion, *Hagiwara* only discloses a single light source 1, and does not provide any correlation between possible openings in reticle R and light source 1. *Hagiwara* thus fails to disclose at least “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 1 (emphasis added), and therefore cannot cure the deficiencies of *Pierrat*.

*Hiroi* ‘550 fails to cure the deficiencies of *Pierrat* and *Hagiwara*. *Hiroi* ‘550 discloses “stage 6 [including wafer 31] is scanned in the Y direction .... the deflector 105 is scanned in the X direction ... a voltage to the blanking plate 63 is turned off to let the electron beam 2 fall on the wafer 31 for scanning the surface thereof.” *Hiroi* ‘550, col. 10, lines 21-26. *Hiroi* ‘550 further discloses “[b]ackscattered electrons or secondary electrons produced from the wafer 31 are detected by the detector ... [and] a digital image of stripe region 34 is attained.” *Id.*, at col. 10, lines 26-29. The digital image may then be used to determine pattern defects. See *Id.*, at col. 10, lines 29-50. *Hiroi* ‘550,

however, provides not disclosure or suggestion of a combination including “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 1 (emphasis added).

Claim 1 also recites a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film.” The references, whether taken alone or in combination, also fail to disclose or suggest at least this feature. *Pierrat* and *Hiroi* ‘550 fail to disclose or suggest at least “the effective light sources,” as recited in amended claim 1, and are not relied upon by the Examiner for such teachings.

*Hagiwara*, relied upon by the Examiner for allegedly disclosing “the effective light sources,” fails to cure the deficiencies of *Pierrat* and *Hiroi* ‘550 for at least the reasons presented above. Moreover, *Hagiwara* discloses that scattering light occurring from each point on the scanning line LCR is condensed by four objective lenses L101, L201, LL1, LL2 to be photoelectrically converted by sixteen photoelectric conversion elements, light detecting surfaces of which are positioned on pupil-conjugate planes of the objectives (PP plane 1, PP plane 2, PP plane 1L, PP plane 2L). See, *Hagiwara*, col. 23, lines 44-51. However, *Hagiwara* fails to disclose or suggest a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1.

Accordingly, the elements recited in claim 1 are neither taught nor suggested by the applied references. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claim 1.

For at least the reasons above, claim 1 is allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 under 35 U.S.C. § 103(a).

2. Claims 2 and 3

Claims 2 and 3 depend from claim 1 and thus require all of the elements recited in claim 1. As discussed above, *Pierrat*, *Hagiwara*, and *Hiroi '550* fail to disclose or suggest a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1 and required by claims 2 and 3. *Hiroi '054* fails to cure the deficiencies of *Pierrat*, *Hagiwara*, and *Hiroi '550*.

The Examiner cites *Hiroi '054* for allegedly teaching “the reference image data and the inspection image data are at least one of a brightness of the inspections image of the inspection pattern and a shape of the inspection pattern.” Office Action, page 5. Such alleged teachings, even if combinable with *Pierrat, Hagiwara*, and *Hiroi '550*, fail to cure the deficiencies of *Pierrat, Hagiwara*, and *Hiroi '550*. That is, *Hiroi '054* also fails to disclose a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1, and required by claims 2 and 3. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination.

A *prima facie* case of obviousness has thus not been established for claims 2-4, 6, and 7. Claims 2-4, 6, and 7 are therefore allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 2-4, 6, and 7 under 35 U.S.C. § 103(a).

3. Claims 4, 6, and 7

Claims 4, 6, and 7 depend from claim 1 and thus require all of the elements recited in claim 1. As discussed above, *Pierrat, Hagiwara*, and *Hiroi '550* fail to disclose or suggest a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output



from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1 and required by claims 4, 6, and 7. *Hiroi '365* fails to cure the deficiencies of *Pierrat*, *Hagiwara*, and *Hiroi '550*.

The Examiner cites *Hiroi '365* for allegedly teaching “the inspection method wherein the imaging components are a plurality of pinholes.” Office Action, page 7. Such alleged teachings, even if combinable with *Pierrat*, *Hagiwara*, and *Hiroi '550*, fail to cure the deficiencies of *Pierrat*, *Hagiwara*, and *Hiroi '550*. That is, *Hiroi '365* also fails to disclose a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1, and required by claims 4, 6, and 7. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination.

A *prima facie* case of obviousness has thus not been established for claims 4, 6, and 7. Claims 4, 6, and 7 are therefore allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 4, 6, and 7 under 35 U.S.C. § 103(a).

4. Claim 5

Claim 5 depends from claim 1 and thus requires all of the elements recited in claim 1. As discussed above, *Pierrat, Hagiwara, and Hiroi '550* fail to disclose or suggest a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1 and required by claim 5. *Schulze* fails to cure the deficiencies of *Pierrat, Hagiwara, and Hiroi '550*.

The Examiner cites *Schulze* for allegedly teaching “imaging components are a plurality of lenses in a lens array.” Office Action, page 9. Such alleged teachings, even if combinable with *Pierrat, Hagiwara, and Hiroi '550*, fail to cure the deficiencies of *Pierrat, Hagiwara, and Hiroi '550*. That is, *Schulze* also fails to disclose a combination including at least “generating a plurality of inspection patterns of the resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 1, and required by claim 5. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination.

A *prima facie* case of obviousness has thus not been established for claim 5. Claim 5 is therefore allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 5 under 35 U.S.C. § 103(a).

5. Claims 8, 11, 13, and 14

Claim 8 recites a processor for inspecting an illumination optical system including “a plurality of inspection patterns of a resist film having a plurality of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components.” *Yamada* fails to disclose or suggest the claimed processor.

*Yamada* discloses the control unit 150 of the electron-beam exposure device 100, including a data-management unit 153 storing exposure data in a buffer memory 154 and sending the sub-deflection data to a sub-deflector-deflection setting unit 155. See *Yamada*, col. 2, lines 5-26, and Fig. 1. *Yamada*, however, provides no disclosure or suggestion of “a plurality of inspection patterns of a resist film having a plurality of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 8. The Examiner acknowledges this deficiency of *Yamada* at page 4 of the Office Action.

*Noguchi* fails to cure the above-noted deficiencies of *Yamada*. *Noguchi* teaches a projection exposure device 3000 where a mask circuit pattern 104 of a mask 100 illuminated by light from a mercury lamp 3101 is imaged onto a substrate 200. See *Noguchi*, col. 6, lines 52-58, col. 7, lines 55-60, Fig. 4 and Fig. 5. *Noguchi* also discloses an eye 3301 of an imaging lens, an image 3305a of a light source imaged on the eye, and diffraction images 3305b, 3305c of a light source resulting a circuit pattern on a mask 100. See *Id.*, at col. 10, lines 53-60, and Figs. 15(a) and 15(b). *Noguchi* further discloses “light having transmitted through a mask circuit pattern 104 (shown, for example, in FIG. 37) having a high contrast on the wafer (substrate) 200 through an imaging lens (reduction projection lens) 3201 and an imaging spatial filter 3302 mounted in the vicinity of a pupil of the imaging lens” (col. 14, lines 7-13), wherein “[t]he light source spatial filter 3301 forms a light source of a ring portion 3305...” (col. 14, lines 20-21). *Noguchi* thus discloses using a light source spatial filter in the eye of the imaging lens 3301. Accordingly, *Noguchi* cannot disclose or suggest a combination including “a plurality of inspection patterns of a resist film having a plurality of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 8 (emphasis added).

*Hagiwara* fails to cure the deficiencies of *Yamada* and *Noguchi*, for at least the reasons present above with respect to claim 1. That is, *Hagiwara* also fails to disclose a combination including “a plurality of inspection patterns of a resist film having a plurality

of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 8 (emphasis added).

Claim 8 also recites a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film.” The references, whether taken alone or in combination, also fail to disclose or suggest at least this feature. *Yamada* and *Noguchi* fail to disclose or suggest at least “the effective light sources,” as recited in amended claim 8, and are not relied upon by the Examiner for such teachings.

*Hagiwara*, relied upon by the Examiner for allegedly disclosing “the effective light sources,” fails to cure the deficiencies of *Yamada* and *Noguchi* for at least the reasons presented above. *Hagiwara*, therefore, fails to disclose or suggest a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 8.

Accordingly, the elements recited in claim 8 are neither taught nor suggested by the applied references. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. Accordingly, no reason has been clearly articulated as to why the claim would have

been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claim 8.

For at least the reasons above, claim 8 is allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 8 under 35 U.S.C. § 103(a).

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 9-11, 13, and 14 under 35 U.S.C. § 103(a).

6. Claim 12

Claim 12 depends from claim 8 and thus requires all of the elements recited in claim 15. As discussed above, *Yamada*, *Noguchi* and *Hagiwara* fail to disclose or suggest a combination including at least “a plurality of inspection patterns of a resist film having a plurality of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 8 and required by claim 12. *Schulze* fails to cure the deficiencies of *Yamada*, *Noguchi* and *Hagiwara*.

The Examiner cites to *Schulze* for allegedly disclosing “the imaging components are a plurality of lenses in a lens array.” Office Action, page 14. Such alleged

teachings, even if combinable with *Yamada*, *Noguchi* and *Hagiwara* fail to cure the above-noted deficiencies of *Yamada*, *Noguchi* and *Hagiwara*. That is, *Schulze* also fails to disclose a combination including at least “a plurality of inspection patterns of a resist film having a plurality of openings, the inspection patterns obtained by projecting exposure beams output from a plurality of effective light sources onto the resist film coated on a surface of an exposure target substrate by a plurality of imaging components,” wherein “each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 8, and required by claim 12. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination.

A *prima facie* case of obviousness has thus not been established for claim 12. Claim 12 is therefore allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 12 under 35 U.S.C. § 103(a).

7. Claims 15-18 and 20

Claim 15 recites a combination including “generating a plurality of inspection patterns of the inspection resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the inspection resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components.” *Hiroi ‘365* fails to disclose or suggest this feature.

*Hiroi ‘365* discloses a pattern on an object, such as a semiconductor wafer, formed by a material A3 and a material B4 (see col. 12, lines 4-9, and Figs. 6A to 6E), and a difference in the image signal detected by the sensor 11 according to whether the scan direction of the electron beam is the X direction or Y direction because of the charge-up ease phenomenon in the pattern (see col. 14, lines 33-39). *Hiroi ‘365* further discloses “[i]f the material and the section shape of the pattern of the object ... are changed, the charge-up phenomenon and the charge-up ease phenomenon ... for the pattern located in the upper layer also change.” *Hiroi ‘365*, col. 16, lines 21-26.

*Hiroi ‘365*, however, provides no disclosure or suggestion of “generating a plurality of inspection patterns of the inspection resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the inspection resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 15.

*Hagiwara* fails to cure the deficiencies of *Hiroi ‘365*, for at least the reasons present above with respect to claim 1. That is, *Hagiwara* also fails to disclose a



combination including “generating a plurality of inspection patterns of the inspection resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the inspection resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” as recited in claim 15 (emphasis added).

Claim 15 also recites a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film.” The references, whether taken alone or in combination, also fail to disclose or suggest at least this feature. *Hiroi* ‘365 fail to disclose or suggest at least “the effective light sources,” as recited in amended claim 15, and are not relied upon by the Examiner for such teachings.

*Hagiwara*, relied upon by the Examiner for allegedly disclosing “the effective light sources,” fails to cure the deficiencies of *Hiroi* ‘365 for at least the reasons presented above. *Hagiwara*, therefore, fails to disclose or suggest a combination including “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 15.

Accordingly, the elements recited in claim 15 are neither taught nor suggested by the applied references. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. Accordingly, no reason has been clearly articulated as to why the claim would have

been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claim 15.

For at least the reasons above, claim 15 is allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 15 under 35 U.S.C. § 103(a).

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of dependent claims 16-18 and 20 under 35 U.S.C. § 103(a).

8. Claim 19

Claim 19 depends from claim 15 and thus requires all of the elements recited in claim 15. As discussed above, *Hiroi '365* and *Hagiwara* fail to disclose or suggest a combination including at least “generating a plurality of inspection patterns of the inspection resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the inspection resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components,” and “the effective light sources being placed on a different optical conjugate plane than the surface of the resist film,” as recited in claim 15 and required by claim 19. *Schulze* fails to cure the deficiencies of *Hiroi '365* and *Hagiwara*.

The Examiner cites to *Schulze* for allegedly disclosing “the imaging components are a plurality of lenses in a lens array.” Office Action, page 19. Such alleged teachings, even if combinable with *Hiroi '365* and *Hagiwara* fail to cure the above-noted

deficiencies of *Hiroi '365* and *Hagiwara*. That is, *Schulze* also fails to disclose a combination including at least "generating a plurality of inspection patterns of the inspection resist film having a plurality of openings, by projecting exposure beams output from a plurality of effective light sources onto the inspection resist film via the imaging components, wherein each opening corresponds to one of the effective light sources, and each inspection pattern corresponds to one of the imaging components," and "the effective light sources being placed on a different optical conjugate plane than the surface of the resist film," as recited in claim 15, and required by claim 19. Nor has the Examiner explained how teachings of the references could be modified to achieve the claimed combination.

A *prima facie* case of obviousness has thus not been established for claim 19. Claim 19 is therefore allowable. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 19 under 35 U.S.C. § 103(a).

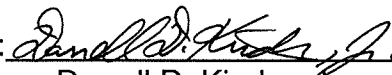
In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration of this application and the timely allowance of the claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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